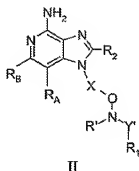


AMENDMENTS TO THE CLAIMS

1-17. (Canceled)

18. (Currently amended) A compound of the formula (II):



wherein:

X is selected from the group consisting of -CH(R_{9a})-alkylene- and -CH(R_{9a})-alkenylen-, wherein the alkylene and alkenylene are optionally interrupted by one or more -O- groups;

Y' is selected from the group consisting of,

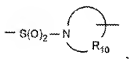
a bond,

-C(O)-,

-C(S)-,

-S(O)₂-,

-S(O)₂-N(R₈)-,



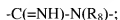
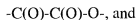
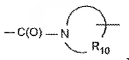
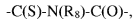
C(O)-O-,

-C(O)-N(R₈)-,

-C(S)-N(R₈)-,

-C(O)-N(R₈)-S(O)₂-,

-C(O)-N(R₈)-C(O)-,



R₁ and R' are independently selected from the group consisting of

hydrogen,

alkyl,

alkenyl,

aryl,

arylalkylenyl,

heteroaryl,

heteroarylalkylenyl,

heterocyclyl, and

heterocyclylalkylenyl, and

wherein the alkyl, alkenyl, aryl, arylalkylenyl, heteroaryl, heteroarylalkylenyl,

heterocyclyl, or heterocyclylalkylenyl[[[,]] group is unsubstituted or substituted by one or more substituents selected from the group consisting of:

hydroxyl,

alkyl,

haloalkyl,

hydroxyalkyl,

alkoxy,

dialkylamino,

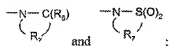
-S(O)₀₋₂-alkyl,

-S(O)₀₋₂-aryl,

-NH-S(O)₂-alkyl,

-NH-S(O)₂-aryl,
haloalkoxy,
halogen,
nitrile,
nitro,
aryl,
heteroaryl,
heterocyclyl,
aryloxy,
arylalkyleneoxy,
-C(O)-O-alkyl,
-C(O)-N(R₈)₂,
-N(R₈)-C(O)-alkyl,
-O-C(O)-alkyl, and
-C(O)-alkyl;

or R₁ and R' together with the nitrogen atom and Y' to which they are bonded can join to form a ring selected from the group consisting of:



~~R_A and R_B are each independently selected from the group consisting of:~~

hydrogen;
halogen;
alkyl;
alkenyl;
alkoxy;
alkylthio; and
-N(R₀)₂.

or when taken together, R_A and R_B to form a fused aryl ring or heteroaryl ring containing one heteroatom selected from the group consisting of N and S, wherein the aryl or heteroaryl ring is

unsubstituted or substituted by one or more R groups, or substituted by one R₃ group, or substituted by one R₃ group and one R group;

~~or when taken together, R_A and R_B form a fused 5 to 7 membered saturated ring, optionally containing one heteroatom selected from the group consisting of N and S, and unsubstituted or substituted by one or more R groups;~~

R is selected from the group consisting of:

halogen,
hydroxyl,
alkyl,
alkenyl,
haloalkyl,
alkoxy,
alkylthio, and
-N(R₉)₂;

R₂ is selected from the group consisting of:

~~-R₄₇, -R₁₁,
-X'-R₄₇, -X''-R₁₁, and
-X'-Y-R₄₇, -X''-Y''-R₁₁; and
-X'-R₅;~~

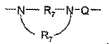
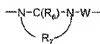
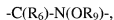
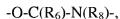
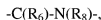
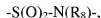
R₃ is selected from the group consisting of:

-Z-R₄,
-Z-X'-R₄,
-Z-X'-Y-R₄, and
-Z-X'-R₅;

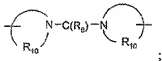
each X' is independently selected from the group consisting of alkylene, alkenylene, alkynylene, arylene, heteroarylene, and heterocyclylene, wherein the alkylene, alkenylene, and alkynylene groups can be optionally interrupted or terminated with arylene, heteroarylene, or heterocyclylene, and optionally interrupted by one or more -O- groups;

each X'' is independently selected from the group consisting of alkylene, alkenylene, alkynylene, wherein the alkylene, alkenylene, and alkynylene groups can be optionally interrupted by one or more -O- groups;

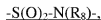
each Y is independently selected from the group consisting of:

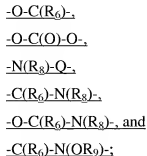


, and



each Y''' is independently selected from the group consisting of:

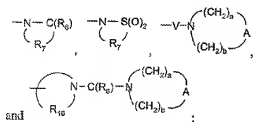




Z is a bond or -O-;

each R₄ is independently selected from the group consisting of hydrogen, alkyl, alkenyl, alkynyl, aryl, arylalkylenyl, aryloxyalkylenyl, alkylarylenyl, heteroaryl, heteroarylalkylenyl, heteroaryloxyalkylenyl, alkylheteroarylenyl, and heterocyclyl, wherein the alkyl, alkenyl, alkynyl, aryl, arylalkylenyl, aryloxyalkylenyl, alkylarylenyl, heteroaryl, heteroarylalkylenyl, heteroaryloxyalkylenyl, alkylheteroarylenyl, and heterocyclyl groups can be unsubstituted or substituted by one or more substituents independently selected from the group consisting of alkyl, alkoxy, hydroxyalkyl, haloalkyl, haloalkoxy, halogen, nitro, hydroxyl, mercapto, cyano, aryl, aryloxy, arylalkyleneoxy, heteroaryl, heteroaryloxy, heteroarylalkyleneoxy, heterocyclyl, amino, alkylamino, dialkylamino, (dialkylamino)alkyleneoxy, and in the case of alkyl, alkenyl, alkynyl, and heterocyclyl, oxo;

each R₅ is independently selected from the group consisting of:



each R₆ is independently selected from the group consisting of =O and =S;

each R₇ is independently C₂₋₇ alkylene;

each R₈ is independently selected from the group consisting of hydrogen, C₁₋₁₀ alkyl, C₂₋₁₀ alkenyl, C₁₋₁₀ alkoxy-C₁₋₁₀ alkylenyl, and aryl-C₁₋₁₀ alkylenyl;

each R₉ is independently selected from the group consisting of hydrogen and alkyl;

R_{9a} is selected from the group consisting of hydrogen and alkyl which is optionally interrupted by one or more -O- groups;

each R₁₀ is independently C₃₋₈ alkylene;

each R₁₁ is independently selected from the group consisting of hydrogen, alkyl, alkenyl, alkynyl, wherein the alkyl, alkenyl, and alkynyl groups can be unsubstituted or substituted by one or more substituents independently selected from the group consisting of alkyl, alkoxy, hydroxyalkyl, haloalkyl, haloalkoxy, halogen, nitro, hydroxyl, mercapto, cyano, amino, alkylamino, dialkylamino, (dialkylamino)alkyleneoxy, and in the case of alkyl, alkenyl, and alkynyl, oxo;

each A is independently selected from the group consisting of -O-, -C(O)-, -CH₂-, -S(O)₀₋₂-, and -N(R₄)-;

each Q is independently selected from the group consisting of a bond, -C(R₆)-, -C(R₆)-C(R₆)-, -S(O)₂-, -C(R₆)-N(R₈)-W-, -S(O)₂-N(R₈)-, -C(R₆)-O-, and -C(R₆)-N(OR₉)-;

each W is independently selected from the group consisting of a bond, -C(O)-, and -S(O)₂-;

each V is independently selected from the group consisting of -C(R₆)-, -O-C(R₆)-, -N(R₈)-C(R₆)-, and -S(O)₂-; and

a and b are independently integers from 1 to 6 with the proviso that a + b is ≤ 7;
or a pharmaceutically acceptable salt thereof.

19. (Canceled)

20. (Previously presented) The compound or salt of claim 18 wherein X is -C₃₋₅ alkylene- or -CH₂CH₂OCH₂CH₂-.

21. (Previously presented) The compound or salt of claim 18 wherein R' is selected from the group consisting of hydrogen and C₁₋₄ alkyl.

22. (Canceled)

23. (Previously presented) The compound or salt of claim 18 wherein Y' is -C(O)-, -S(O)₂-, or -C(O)-N(R₈)-

24. (Canceled)

25. (Previously presented) The compound or salt of claim 18 wherein R₁ is selected from the group consisting of C₁₋₆ alkyl and pyridyl.

26. (Previously presented) The compound or salt of claim 18 wherein R₁ is selected from the group consisting of alkyl, alkenyl, aryl, and heteroaryl, each of which is optionally substituted by one or more substituents selected from the group consisting of -O-alkyl, -O-aryl, -S-alkyl, -S-aryl, halogen, -O-C(O)-alkyl, -C(O)-O-alkyl, haloalkoxy, haloalkyl, and aryl.

27-28. (Canceled)

29. (Previously presented) The compound or salt of claim 18 wherein R₂ is selected from the group consisting of hydrogen, alkyl, and alkoxyalkylenyl.

30. (Previously presented) The compound or salt of claim 29 wherein R₂ is selected from the group consisting of hydrogen, methyl, ethyl, propyl, butyl, ethoxymethyl, 2-methoxyethyl, and methoxymethyl.

31. (Currently amended) The compound or salt of claim 18 wherein R₂ is selected from the group consisting of:

hydrogen,

alkyl,

alkenyl,

aryl,

heteroaryl,

~~heterocycetyl;~~
 alkylene-Y"-alkyl, and
 alkylene-Y"-alkenyl,
~~alkylene-Y"-aryl, and~~

wherein the alkyl or alkenyl group is unsubstituted or substituted by one or more
 substituents selected from the group consisting of:

hydroxyl,
 halogen,
 $-N(R_{8a})_2$,
 $-C(O)-C_{1-10}$ alkyl,
 $-C(O)-O-C_{1-10}$ alkyl, and
 $-N_3[[,]]$;
~~aryl;~~
~~heteroaryl;~~
~~heterocycetyl;~~
~~-C(O)-aryl, and~~
~~-C(O)-heteroaryl;~~

wherein:

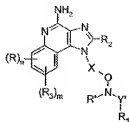
Y" is -O- or -S(O)₀₋₂; and

each R_{8a} is independently selected from the group consisting of hydrogen, C₁₋₁₀ alkyl, and
 C₂₋₁₀ alkenyl.

32. (Currently amended) The compound or salt of claim 18 wherein R_A and R_B form a fused
 aryl ring or ~~heteroaryl ring containing one N~~, wherein the aryl ring or ~~heteroaryl ring~~ is
 unsubstituted.

33. (Canceled)

34. (Currently amended) A compound of the formula (III):



III

wherein:

X is selected from the group consisting of -CH(R_{9a})-alkylene- and -CH(R_{9a})-alkenylene-, wherein the alkylene and alkenylene are optionally interrupted by one or more -O- groups;

Y' is selected from the group consisting of:

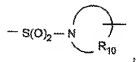
a bond,

-C(O)-,

-C(S)-,

-S(O)₂-,

-S(O)₂-N(R₈)-,



-C(O)-O-,

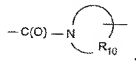
-C(O)-N(R₈)-,

-C(S)-N(R₈)-,

-C(O)-N(R₈)-S(O)₂-,

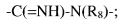
-C(O)-N(R₈)-C(O)-,

-C(S)-N(R₈)-C(O)-,



-C(O)-C(O)-,

C(O)-C(O)-O-, and



each R is independently selected from the group consisting of:

halogen,
hydroxyl,
alkyl,
alkenyl,
haloalkyl,
alkoxy,
alkylthio, and
 $-N(R_9)_2$;

R₁ and R' are independently selected from the group consisting of:

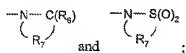
hydrogen,
alkyl,
alkenyl,
aryl,
arylalkylenyl,
heteroaryl,
heteroarylalkylenyl,
heterocyclyl, and
heterocyclylalkylenyl, and

wherein the alkyl, alkenyl, aryl, arylalkylenyl, heteroaryl, heteroarylalkylenyl, heterocyclyl, or heterocyclylalkylenyl[[,]] group is unsubstituted or substituted by one or more substituents selected from the group consisting of:

hydroxyl,
alkyl,
haloalkyl,
hydroxyalkyl,
alkoxy,
dialkylamino,

$\text{-S(O)}_{0-2}\text{-alkyl}$,
 $\text{-S(O)}_{0-2}\text{-aryl}$,
 $\text{-NH-S(O)}_2\text{-alkyl}$,
 $\text{-NH-S(O)}_2\text{-aryl}$,
 haloalkoxy,
 halogen,
 nitrile,
 nitro,
 aryl,
 heteroaryl,
 heterocyclyl,
 aryloxy,
 arylalkyleneoxy,
 -C(O)-O-alkyl ,
 $\text{-C(O)-N(R}_8)_2$,
 $\text{-N(R}_8)\text{-C(O)-alkyl}$,
 -O-C(O)-alkyl , and
 -C(O)-alkyl ;

or R_1 and R' together with the nitrogen atom and Y' to which they are bonded can join to form a ring selected from the group consisting of:

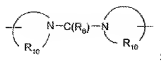


R_2 is selected from the group consisting of:

$\text{-R}_{45}\text{-R}_{11}$,
 $\text{-X'-R}_{45}\text{-X''-R}_{11}$, and
 $\text{-X'-Y-R}_{45}\text{-X''-Y'''-R}_{11}$; and
 -X'-R_{55} ;

R_3 is selected from the group consisting of:

-Z-R_4 ,



each Y''' is independently selected from the group consisting of:

-S(O)₀₋₂-

-S(O)₂-N(R₈)-

-C(R₆)-

-C(R₆)-O-

-O-C(R₆)-

-O-C(O)-O-

-N(R₈)-O-

-C(R₆)-N(R₈)-

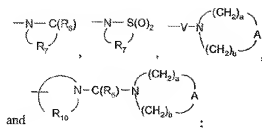
-O-C(R₆)-N(R₈)-

-C(R₆)-N(OR₉)-

Z is a bond or -O-;

each R₄ is independently selected from the group consisting of hydrogen, alkyl, alkenyl, alkynyl, aryl, arylalkylenyl, aryloxyalkylenyl, alkylarylenyl, heteroaryl, heteroarylalkylenyl, heteroaryloxyalkylenyl, alkylheteroarylenyl, and heterocyclyl, wherein the alkyl, alkenyl, alkynyl, aryl, arylalkylenyl, aryloxyalkylenyl, alkylarylenyl, heteroaryl, heteroarylalkylenyl, heteroaryloxyalkylenyl, alkylheteroarylenyl, and heterocyclyl groups can be unsubstituted or substituted by one or more substituents independently selected from the group consisting of alkyl, alkoxy, hydroxyalkyl, haloalkyl, haloalkoxy, halogen, nitro, hydroxyl, mercapto, cyano, aryl, aryloxy, arylalkyleneoxy, heteroaryl, heteroaryloxy, heteroarylalkyleneoxy, heterocyclyl, amino, alkylamino, dialkylamino, (dialkylamino)alkyleneoxy, and in the case of alkyl, alkenyl, alkynyl, and heterocyclyl, oxo;

each R₅ is independently selected from the group consisting of:



each R_6 is independently selected from the group consisting of =O and =S;

each R₇ is independently C₂₋₇ alkylene;

each R₈ is independently selected from the group consisting of hydrogen, C₁₋₁₀ alkyl, C₂₋₁₀ alkenyl, C₁₋₁₀ alkoxy-C₁₋₁₀ alkylenyl, and aryl-C₁₋₁₀ alkylenyl;

each R₀ is independently selected from the group consisting of hydrogen and alkyl;

R_{9a} is selected from the group consisting of hydrogen and alkyl which is optionally interrupted by one or more -O- groups;

each R₁₀ is independently C₃₋₈ alkylene;

each R_{1j} is independently selected from the group consisting of hydrogen, alkyl, alkenyl, alkynyl, wherein the alkyl, alkenyl, and alkynyl groups can be unsubstituted or substituted by one or more substituents independently selected from the group consisting of alkyl, alkoxy, hydroxyalkyl, haloalkyl, haloalkoxy, halogen, nitro, hydroxyl, mercapto, cyano, amino, alkylamino, dialkylamino, (dialkylamino)alkyleneoxy, and in the case of alkyl, alkenyl, and alkynyl, oxo;

each A is independently selected from the group consisting of -O-, -C(O)-, -CH₂-, -S(O)₀₋₂-, and -N(R₄)-;

each Q is independently selected from the group consisting of a bond, -C(R₆)-, -C(R₆)-C(R₆)-, -S(O)₀-, -C(R₆)-N(R₈)-W-, -S(O)₂-N(R₈)-, -C(R₆)-O-, and -C(R₆)-N(OR₉);

each W is independently selected from the group consisting of a bond, -C(O)-, and -S(O)₂-;

each V is independently selected from the group consisting of -C(R₆)-, -O-C(R₆)-, -N(R₈)-C(R₆)-, and -S(O)₂-;

a and b are independently integers from 1 to 6 with the proviso that $a + b$ is ≤ 7 ;

n is an integer from 0 to 4; and

m is 0 or 1, with the proviso that when m is 1, n is 0 or 1;

or a pharmaceutically acceptable salt thereof.

35. (Canceled)

36. (Previously presented) The compound or salt of claim 34 wherein X is $-C_{3-5}$ alkylene- or $-CH_2CH_2OCH_2CH_2-$.

37. (Previously presented) The compound or salt of claim 34 wherein R' is selected from the group consisting of hydrogen and C_{1-4} alkyl.

38-39. (Canceled)

40. (Previously presented) The compound or salt of claim 34 wherein Y' is $-C(O)-$, $-S(O)_2-$, or $-C(O)-N(R_8)-$.

41. (Canceled)

42. (Previously presented) The compound or salt of claim 34 wherein R_1 is selected from the group consisting of C_{1-6} alkyl and pyridyl.

43. (Previously presented) The compound or salt of claim 34 wherein R_1 is selected from the group consisting of alkyl, alkenyl, aryl, and heteroaryl, each of which is optionally substituted by one or more substituents selected from the group consisting of $-O$ -alkyl, $-O$ -aryl, $-S$ -alkyl, $-S$ -aryl, halogen, $-O-C(O)$ -alkyl, $-C(O)$ -O-alkyl, haloalkoxy, haloalkyl, and aryl.

44-45. (Canceled)

46. (Previously presented) The compound or salt of claim 34 wherein R_2 is selected from the group consisting of hydrogen, alkyl, and alkoxyalkylenyl.

47. (Previously presented) The compound or salt of claim 46 wherein R_2 is selected from the group consisting of hydrogen, methyl, ethyl, propyl, butyl, ethoxymethyl, 2-methoxyethyl, and methoxymethyl.

48. (Currently amended) The compound or salt of claim 34 wherein R_2 is selected from the group consisting of:

hydrogen,

alkyl,

alkenyl,

~~aryl,~~

~~heteroaryl,~~

~~heterocycetyl,~~

alkylene- Y'' -alkyl, and

alkylene- Y'' -alkenyl,

~~alkylene- Y'' -aryl, and~~

wherein the alkyl or alkenyl group is unsubstituted or substituted by one or more

substituents selected from the group consisting of:

hydroxyl,

halogen,

$N(R_{8a})_2$,

-C(O)-C₁₋₁₀ alkyl,

-C(O)-O-C₁₋₁₀ alkyl, and

-N₃,

~~aryl,~~

~~heteroaryl,~~

~~heterocycetyl,~~

-C(O)-aryl, and

-C(O)-heteroaryl;

wherein:

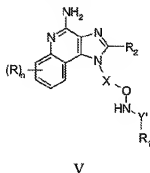
Y" is -O- or -S(O)₀₋₂; and

each R_{8a} is independently selected from the group consisting of hydrogen, C₁₋₁₀ alkyl, and C₂₋₁₀ alkenyl.

49. (Previously presented) The compound or salt of claim 34 wherein m and n are each 0.

50-62. (Canceled)

63. (Currently amended) A compound of the formula (V):



wherein:

X is selected from the group consisting of -CH(R_{9a})-alkylene- and -CH(R_{9a})-alkenylene-;

Y' is selected from the group consisting of

a bond,

-C(O)-,

-C(S)-,

-S(O)₂-,

-S(O)₂-N(R_{8a})-,

-C(O)-O-,

-C(O)-N(R_{8a})

-C(S)-N(R_{8a})-,

-C(O) N(R_{8a})-S(O)₂-,

-C(O)-N(R_{8a})-C(O)-,

-C(S)-N(R_{8a})-C(O)-, and

-C(O)-C(O)-O-;

R₁ is selected from the group consisting of:

hydrogen,

alkyl,

alkenyl,

aryl,

alkylene-aryl,

alkylene-heteroaryl,

alkylene-heterocyclyl,

heteroaryl, and

heterocyclyl, ~~and~~

wherein the alkyl, alkenyl, aryl, arylalkenyl, heteroarylalkenyl, heterocyclalkenyl, heteroaryl or heterocycl[[,]] group is unsubstituted or substituted by one or more substituents selected from the group consisting of:

hydroxyl,

alkyl,

haloalkyl,

hydroxyalkyl,

-O-alkyl,

-S(O)₀₋₂-alkyl,

-S(O)₀₋₂-aryl,

-O-haloalkyl,

halogen,

nitrile,

nitro,

aryl,

heteroaryl,

heterocyclyl,

-O-aryl,
 -O-alkylene-aryl,
 -C(O)-O-alkyl,
 -C(O)-N(R_{8a})₂,
 -N(R_{8a})-C(O)-alkyl,
 -O-C(O)-alkyl, and
 -C(O)-alkyl;

each R is independently selected from the group consisting of alkyl, alkoxy, halogen, hydroxyl, and trifluoromethyl;

R₂ is selected from the group consisting of:

hydrogen,
 alkyl,
 alkenyl,
~~aryl,~~
~~heteroaryl,~~
~~heterocycetyl,~~
 alkylene-Y"-alkyl,
 alkylene-Y"-alkenyl, and
~~alkylene-Y"-aryl, and~~

alkyl or alkenyl substituted by one or more substituents selected from the group consisting of:

hydroxyl,
 halogen,
 -N(R_{8a})₂,
 -C(O)-C₁₋₁₀ alkyl,
 -C(O)-O-C₁₋₁₀ alkyl, and
 -N₃[[.]];
~~aryl,~~
~~heteroaryl,~~

~~heterocyclyl;~~
~~-C(O)-aryl, and~~
~~-C(O)-heteroaryl;~~

Y" is -O- or -S(O)₀₋₂;

each R_{8a} is independently selected from the group consisting of hydrogen, C₁₋₁₀ alkyl, and C₂₋₁₀ alkenyl;

R_{9a} is selected from the group consisting of hydrogen and alkyl which may be optionally interrupted by one or more -O- groups; and

n is an integer from 0 to 4;

or a pharmaceutically acceptable salt thereof.

64-133. (Canceled)

134. (Previously presented) A pharmaceutical composition comprising a therapeutically effective amount of a compound or salt of claim 18 in combination with a pharmaceutically acceptable carrier.

135. (Withdrawn and currently amended) A method of inducing ~~cytokine~~ INF and/or TNF biosynthesis in an animal comprising administering an effective amount of a compound or salt of claim 18 to the animal.

136-137. (Cancelled)

138. (Previously presented) A pharmaceutical composition comprising a therapeutically effective amount of a compound or salt of claim 34 in combination with a pharmaceutically acceptable carrier.

139. (Cancelled)

140. (Withdrawn and currently amended) A method of inducing ~~cytokine~~ INF and/or TNF biosynthesis in an animal comprising administering an effective amount of a compound or salt of claim 34 to the animal.

141.-145. (Cancelled))